

JIB-1571_SequenceListing_07-18-11_ST25.txt
SEQUENCE LISTING

<110> Winter Sederoff, Heike
Huber, Steven C
Larabell, Carolyn A

<120> SYNTHETIC PEPTIDES THAT CAUSE F-ACTIN BUNDLING AND BLOCK ACTIN DEPOLYMERIZATION

<130> JIB-1571

<140> 10/576,757
<141> 2006-04-20

<150> US 60/513,275
<151> 2003-10-20

<160> 30

<170> PatentIn version 3.5

<210> 1
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<212> PRT
<213> Artificial

<220>
<223> synthetic consensus active Zea mays Sucrose Synthase (SuSy) peptide

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<223> synthetic peptide derived from Zea mays SuSy1 protein 367-381

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<223> synthetic peptide derived from ze a mays SuSy2 protein 357-389

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<223> synthetic peptide derived from Drosophila melanogaster Actin 2 protein and Homo sapiens beta and gamma Actin proteins

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<210> 6
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<212> PRT
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<223> synthetic peptide derived from Drosophila melanogaster Actin 3, 5, and 6 proteins and Homo sapiens alpha Actin protein

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Glu His Gly Ile Ile Thr Asn Trp Asp Asp Met Glu Lys Ile Trp
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Glu His Gly Ile Val Lys Asp Trp Asn Asp Met Glu Arg Ile Trp
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<223> synthetic peptide derived from *Drosophila melanogaster* ARP2

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Glu Asn Gly Val Val Arg Asn Trp Asp Asp Met Cys His Val Trp
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Gly Asp Arg Val Leu Ser Arg Leu His Ser Val Arg Glu Arg Ile Gly
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Lys

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<223> SS2 active peptide based on *Zea mays* SuSy 377-392

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Lys Lys

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<223> SS11 inactive synthetic peptide

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Ile Leu Arg Val Pro Phe Arg Thr Glu Asn Gly Ile Val Arg Lys
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<211> 16

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<223> SS15 less active synthetic peptide

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<221> SITE

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<223> replaced Tryptophan residue with Alanines

<220>

<221> SITE

<222> (13)..(13)

<223> replaced Tryptophan residue with Alanine

<400> 13

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<223> SS16 less active synthetic peptide corresponding to short middle portion of SS12 synthetic peptide

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Ser Arg Phe Glu Val Trp Pro Tyr Leu
1 5

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<220>

<223> NR11 inactive synthetic peptide

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Gly Pro Thr Leu Lys Arg Thr Ala Ser Thr Ala Phe Met Asn Thr Thr
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Ser Lys Lys

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Gly Arg Met Arg Arg Ile Ala Thr Val Glu Met Met Lys Lys
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Trp Ile Ser Arg Phe Glu Val Trp
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<223> synthetic peptide of Drosophila melanogaster Actin protein consensus sequence

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Glu His Gly Ile Val Thr Asn Trp Asp Asp Met Glu Lys Ile Trp His
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His Thr Phe Tyr
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synthetic peptide
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<210> 23
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<220>
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Trp Ile Ser Arg Phe Glu Val Trp Pro Tyr Leu Lys Lys
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<210> 24

JIB-1571_SequenceListing_07-18-11_ST25.txt

<211> 20
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<220>
<223> SS synthetic peptide C

<400> 24

Glu Asn Gly Ile Val Arg Lys Trp Ile Ser Arg Phe Glu Val Trp Pro
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Tyr Leu Lys Lys
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<210> 25
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<223> X=His or Asn

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<221> VARIANT
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<223> X= Val or Leu or Ile

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<223> X= Arg or Thr or Lys

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<223> X= Lys, Asn, Asp

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<222> (9)..(9)
<223> X= Ile or Asp or Asn

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<222> (10)..(10)
<223> X= Ser or Asp

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<221> VARIANT
<222> (11)..(11)
<223> X= Arg or Met

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<222> (12)..(12)
<223> X= Glu, Phe, Cys, or Lys

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<221> VARIANT
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<223> X= Glu, Asp, Lys, Arg, or His

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<222> (14)..(14)
<223> X= Ile, Leu, or Val

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<221> VARIANT
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<222> (17)..(17)
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<221> VARIANT
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<223> X= Phe or none

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<221> VARIANT
<222> (20)..(20)
<223> X= Tyr or none

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Glu Xaa Gly Ile Xaa Xaa Xaa Trp Xaa Xaa Xaa Xaa Xaa Trp Xaa
1 5 10 15

Xaa Xaa Xaa Xaa
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<210> 26
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<220>
<223> Motif for a synthetic peptide which causes actin bundling and
inhibits actin depolymerization

<220>
<221> VARIANT
<222> (2)..(2)
<223> X = any amino acid

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<220>
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<222> (4)..(4)
<223> X = Ile or Val

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<221> VARIANT
<222> (5)..(7)
<223> X = any amino acid

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<222> (9)..(14)
<223> X = any amino acid

<400> 26

Glu Xaa Gly Xaa Xaa Xaa Xaa Trp Xaa Xaa Xaa Xaa Xaa Xaa Trp
1 5 10 15

<210> 27
<211> 15
<212> PRT
<213> Artificial sequence

<220>
<223> Motif for a synthetic peptide that causes actin bundling and
inhibits actin depolymerization

<220>
<221> VARIANT
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<223> X= Lys, Arg, or His

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<222> (5)..(5)
<223> X= Ala, Val, Leu, Ile, Phe, Trp, Pro, or Met

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<223> X= Lys, Arg, or His

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<222> (14)..(14)
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<400> 27

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Glu Xaa Gly Ile Xaa Xaa Xaa Trp Xaa Xaa Xaa Xaa Xaa Trp
1 5 10 15

<210> 28
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<213> Artificial Sequence

<220>
<223> Formula (I) for active synthetic peptides

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<220>
<221> VARIANT
<222> (4)..(4)
<223> X = Arg, Lys, Asn, or Thr

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<221> VARIANT
<222> (5)..(5)
<223> X = Arg, Lys, Asn, or Asp

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<223> X = Ile, Asp, Asn, or Glu

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<222> (8)..(8)
<223> X = Ser, or Asp

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<221> VARIANT
<222> (9)..(9)
<223> X = Arg, Met, or Ala

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<222> (10)..(10)
<223> X = Phe, or Glu

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<222> (11)..(11)
<223> X =Asp, Glu, Lys, Arg, or His

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<222> (12)..(12)
<223> X =Val, or Ile

<220>
<221> VARIANT
<222> (14)..(14)
<223> X =Pro, or His

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<220>
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<222> (15)..(15)
<223> X =Tyr, or His

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<222> (16)..(16)
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Gly Ile Xaa Xaa Xaa Trp Xaa Xaa Xaa Xaa Xaa Trp Xaa Xaa Xaa
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<212> PRT
<213> Artificial Sequence

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<223> Formula (II) for synthetic active peptides

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<223> X = Ala, Val, Leu, Ile, Phe, Trp, Pro, or Met

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<223> X = Lys, Arg, or His

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<222> (5)..(5)
<223> X = any amino acid

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<221> VARIANT
<222> (7)..(11)
<223> X = any amino acid

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<221> VARIANT
<222> (12)..(12)
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<400> 29

Gly Ile Xaa Xaa Xaa Trp Xaa Xaa Xaa Xaa Xaa Xaa Trp
1 5 10

<210> 30
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<223> SS2 and SS12 subsequence necessary for peptide activity

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<400> 30

Gly Ile Val Arg Trp Lys Ile
1 5